6.0 CUMULATIVE IMPACTS

The State CEQA Guidelines (Section 15355) define a cumulative impact as "an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." The Guidelines further state that "an EIR should not discuss impacts which do not result in part from the evaluated project."

Section 15130(a) of the State CEQA Guidelines requires a discussion of cumulative impacts of a project "when the project's incremental effect is cumulatively considerable." Cumulatively considerable, as defined in Section 15065(c), "means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects."

The evaluation of cumulative impacts is required by Section 15130(b)(1) to be based on either (a) "a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those impacts outside the control of the agency," or (b) "a summary of projections contained in an adopted plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact." This analysis relies on regional planning documents, in accordance with Section 15130(b)(1)(B), to serve as a basis for the analysis of the cumulative effects of the proposed General Plan Update.

The following regional plans are the foundation for the cumulative analysis in this section: SANDAG Regional Comprehensive Plan (RCP) (land use, landform alternation/aesthetics, cultural resources, paleontological resources, agricultural resources, traffic, noise, energy, and housing and population); MSCP (biological resources); Water Quality Control Plan for the San Diego Basin (water quality); San Diego Air Pollution Control District (APCD) Regional Air Quality Strategies (RAQS) (Air Quality); and the Regional Water Facilities Master Plan (utilities). These plans are discussed in Section 5.0 of this EIR and below in the cumulative analysis. They are on file at the City of Chula Vista and are available for review.

On July 23, 2004, the SANDAG Board of Directors adopted the Regional Comprehensive Plan (RCP) for the San Diego region. The RCP serves as the long-term planning framework for the San Diego region. It provides a broad context in which local and regional decisions can be made that move the region toward a sustainable future—a future with more choices and opportunities for all residents of the region. The RCP integrates local land use and transportation decisions and focuses attention on future growth. The RCP contains an incentive-based approach to encourage and channel growth into existing and future urban areas and smart growth communities.

The goal of the RCP is to ensure a high quality of life for current and future generations and to work toward a society that has resolved its housing shortage, transportation problems, and energy issues, and provides healthy, desirable environments for people and nature.

Because the direct impact analysis considers the buildout of the city, the analysis presented in Chapter 5 of this report is, in effect, a cumulative impact analysis. The basis for determining the direct impacts of the adoption of the General Plan Update, whether the Preferred Project or any of the Scenarios, assumes the SANDAG growth projections for the region outside of the General Plan area. The RCP provides the regional basis for the cumulative analysis presented in this section. The growth projections used in the RCP, outside the City of Chula Vista, are consistent for each of the issues evaluated. The cumulative discussion evaluates the proposed project for conformance to the RCP and identifies those areas where the General Plan Update may differ from that plan.

In deciding to rely on regional planning documents, rather than a list of projects or a blended approach, the current effort underway to plan for the development of the Bayfront Planning Area within the City was evaluated. The Bayfront plan represents a reasonably foreseeable project; however, plans for that development are in flux, and there is not, as yet, a fixed plan for development.

As currently being evaluated, the Chula Vista Bayfront Master Plan is considering three master plan concepts. Each concept includes the development of 2,000 multi-family residential units, development of a resort/conference center, mixed-use office/commercial/hotel uses, and civic, marina, and park uses. The area is divided into three main planning areas: the Sweetwater District on the north, the central Harbor District, and the southern Otay District. Table 6-1 provides the general land use breakdown for the preferred plan for each of these areas.

TABLE 6-1
LAND USE SUMMARY FOR THE CHULA VISTA BAYFRONT MASTER PLAN

	District		
Use	Sweetwater	Harbor	Otay
Public/Open space	76 acres	78 acres	86 acres
Civic/Cultural	50,000 square feet	400,000 square feet	None
Hotel(s)	400 rooms	750 rooms	None
Retail, commercial, mixed use	420,000 square feet	1,550,000 square feet	None
Marina/Harbor uses	None	1,100 slips 24 acres	None
Resort conference center	None	2,000 rooms	None
Residential	None	1,300 units	700 units

SOURCE: NOP San Diego Unified Port District.

As part of the cumulative analysis, the potential effect of the development described in Table 6-1 was considered. The goal of the analysis was to consider what land use on the Bayfront property would represent a worst case condition, with the intent to use the worst case condition as the basis for the analysis of the cumulative impacts.

As a result of the review of the condition described in Table 6-1 on the Bayfront property, it was concluded that traffic-related impacts would be worse with the adopted plan (see attachment to Appendix E). This resulted from the fact that the potential residential use involved a corresponding reduction in other office, commercial, and retail uses. In addition, the project currently being considered for the Bayfront property removes the intensive development from the Sweetwater District (formerly known as the Mid-Bayfront area) and places that use in the central and southern portions of the Bayfront Planning Area. By moving this development out of the Sweetwater District, the most intensive development is moved further away from the sensitive San Diego Bay National Wildlife Refuge, and the project is designed to reduce biological and visual impacts relative to the currently adopted plan. The adopted Bayfront plan not only reduces the intensity of development in the Sweetwater District, but moves intense development to the Harbor District, and area previously impacted and currently planned for industrial and commercial uses. As such the currently adopted plan is equivalent or more intensive as it pertains to other impact areas of the cumulative discussion.

The currently adopted plan for the Bayfront is the land use that is part of the RCP developed by SANDAG. Since the RCP uses the adopted land use and the adopted land use represents a worst-case environmental condition, the RCP assumptions were used for the cumulative analysis.

The project is a comprehensive update of the City of Chula Vista General Plan. As considered in this EIR, a Preferred Plan is considered along with three other Scenarios. A broad examination of cumulative impacts involves considering the project together with growth in the region. Development pursuant to the proposed General Plan would occur in accordance with the land use designations and development intensities identified in the Land Use and Transportation Element. These designations promote the redevelopment of underused land to higher uses, compact development, mixed-use development to promote a pedestrian-friendly environment, an improved balance between employment and housing, and protection of Chula Vista's natural resources.

The Chula Vista General Plan designated land uses and the associated potential development correlates to regional growth estimates made by SANDAG. SANDAG estimates anticipated growth for the 18 cities and the unincorporated areas within San Diego County for the purpose of allocating growth to specific areas and identifying regional transportation infrastructure needed to support regional growth.

The population growth projected to occur by 2030 would necessitate augmentation of the City's current housing stock, infrastructure, and public services. Cumulative impacts would occur as a result of multiple projects developed by 2030. The proposed General Plan's strategy is to anticipate the cumulative effects of growth and plan for it in a manner that is balanced in its approach. The focused growth strategy addresses future growth as a whole, and proposes policies to avoid impacts on a cumulative basis.

6.1 Land Use

The cumulative assessment of land use impacts relies on the SANDAG RCP. Land use impacts resulting from the adoption of the General Plan Update are not considered cumulatively considerable. The three largest jurisdictions in San Diego County, including Chula Vista, are currently updating their general plans; the City and County of San Diego are also in the process of updating their General Plans. As discussed in the RCP, these plans promote locating future development near existing and planned urban infrastructure, including transit. New development in the City would place additional demands on regional facilities such as roads and public facilities/utilities; most notably water, wastewater treatment, schools, solid waste disposal, and police and fire protection. The specific cumulative effects related to these issues are discussed under the respective headings in this section.

The GPU's focus on smart growth and walkable communities minimizes much of the potential impacts associated with accommodation of growth. By promoting mobility through an increased jobs/housing balance, transit oriented development, increased densities and more extensive mixed-use developments, Chula Vista's General Plan Update incorporates the planning principles outlined in the RCP.

> The RCP defines a shared vision of the future and lays a foundation to achieve that future by improving connections between land use and transportation plans using smart growth principles, using land use and transportation plans to guide decisions regarding environmental and public facility investments; and focusing on collaboration and incentives to achieve regional goals and objectives (SANDAG 2004: 31).

As recognized in the RCP,

> Chula Vista's draft general plan update takes two approaches to accommodating future growth. In several older areas west of Interstate 805, the plan proposes infill development and redevelopment zones. In the newer, eastern portion of the city, it proposes focusing development in master planned communities designed to support regional transit service, such as bus rapid transit (SANDAG 2004:42).

The RCP identifies seven categories for smart growth in the San Diego area. These include: (1) Metropolitan Center, (2) Urban Center, (3) Town Center, (4) Community Center, (5) Transit Corridor, (6) Special Use Center, and (7) Rural Community. For each of these categories, SANDAG identifies the type and intensity of land use, and the transportation and transit issues associated with that land use. These categories are designed to promote mixed use, particularly associated with transit centers; human scale development with a strong pedestrian orientation, and nearby recreational facilities and public plazas.

The RCP sets the following goals for area planning efforts (SANDAG 2004:76):

> 1. Focus future population and job growth away from rural areas and closer to existing and planned job centers and public facilities to preserve open space and to make more efficient use of existing urban infrastructure.
>
> 2. Create safe, healthy, walkable, and vibrant communities that are designed and built accessible to people of all abilities.
>
> 3. Integrate the development of land use and transportation, recognizing their interdependence.

The Land Use and Transportation Element sets a series of goals and objectives that address these issues. Goal LUT 6.1 states "Safe, healthy, walkable, and vibrant communities with a balance of jobs and housing." To further this goal Policy LUT 4.2 encourages new development that is organized around compact, walkable, mixed-use neighborhoods and districts in order to conserve open space resources, minimize infrastructure costs, and reduce reliance on the automobile. Higher density residential and mixed use development would be completed in accordance with Policy LUT 5.13 that provides the following guidelines:

- Create a pleasant walking environment to encourage pedestrian activity.
- Maximize transit usage.
- Provide opportunities for residents to conduct routine errands close to their residence.
- Integrate with surrounding uses to become a part of the neighborhood rather than an isolated project.
- Use architectural elements or themes from the surrounding neighborhood.
- Provide appropriate transition between land use designations to minimize neighbor compatibility conflicts.

Furthermore, policies associated with Objective LUT 24 stress the importance of integrating the City's planning efforts with other regional planning bodies.

Objective LUT 23 states that the City will:

> Work cooperatively with other agencies and jurisdictions to address regional issues that affect the quality of life for Chula Vista's residents, such as land use, jobs/housing balance, transportation, mobility, and economic prosperity, and advocate proactively with appropriate agencies regarding key issues.

The objective sets the following Policies that address that cooperation:

LUT 24.1: Continue to coordinate with regional planning agencies to address regional issues integral to Chula Vista residents' quality of life, and advocate proactively with appropriate bodies regarding key issues.

LUT 24.2: Coordinate City strategies with SANDAG, member jurisdictions, and other appropriate agencies and/or organizations to meet housing and employment needs.

Because of the use of "smart growth" principals the Preferred Plan and each of the scenarios further the goals of the RCP. Because of the conformance to the smart growth principals in the RCP, the incremental land use effect of adopting the proposed General Plan Update is not cumulatively considerable and is not significant.

6.2 Landform Alteration/Aesthetics

The cumulative assessment of landform relies on the RCP. SANDAG development in the Northwest and Southwest Planning Areas would occur in previously developed locations. The aesthetic effects of the proposed update in the Northwest and Southwest Planning areas are focused on the bulk and mass represented by the designated land uses. The potential for an adverse effect is contingent upon the design and location of future buildings.

Future growth has the potential to impact the visual environment through fundamental changes in land use. Adoption of the Preferred Plan and all three Scenarios would result in substantial changes to landforms and visual quality throughout the General Plan area. Increased density within the Urban Core and Montgomery Subareas would result in increased building heights and mass. In the east, currently undeveloped areas characterized by mesas, canyons, and hills would be developed with urban uses. Objectives LUT 9 and 10 promote and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista.

For the western areas of the city, Objectives LUT 10 and LUT 11 address the aesthetic quality of the developed portions of the city. Objective LUT 10 states:

> Create attractive street environments that complement private and public properties, create attractive public rights-of-way, and provide visual interest for residents and visitors.

While Objective LUT 11 states:

> Ensure that buildings and related site improvements for public and private development are well-designed and compatible with surrounding properties and districts.

The policies associated with these objectives are described in detail in Section 5.2 of this report, and place a high priority on quality architecture, landscape, and site design to enhance the image of Chula Vista. This would be done by using the design review process for multi-family residential and commercial developments to review and evaluate projects prior to issuance of building permits to determine their compliance with the objectives and specific requirements of the City's Design Manual, General Plan, and appropriate zone.

Implementation of these policies reduce direct visual quality impacts within the Urban Core Subarea resulting from the adoption of the Preferred Plan and all three Scenarios, but not to below a level of significance. Direct impacts were determined to remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

The RCP was used to assess the cumulative impact of this effect. The RCP EIR concluded that:

> Increased density in existing neighborhoods may result in buildings that are different in bulk and scale than existing structures. Depending on the buildings location and design, the construction of larger buildings within an already established community poses a significant visual resource impact…" (SANDAG 2004:5.3-10).

The RCP EIR goes on to provide mitigation for this effect in the form of a measure that calls for the design of projects to minimize contrasts in scale and massing between a project and the surrounding natural forms and developments.

Conformance with the proposed General Plan Update objectives and policies reduce visual quality impacts within the General Plan Update Area resulting from the adoption of the

Preferred Plan and all three Scenarios, but not to below a level of significance. As with the RCP mitigation measure, the General Plan policies call for the development of design standards. Impacts remain significant because of the lack of specific design standards at this time. The current project is a General Plan Update and the development of design standards are a zoning and specific plan effort. Until future Specific Plans are developed and zoning specifications are implemented impacts remain significant.

Development in the East Planning Area would result in a significantly changed landform condition. Much of this area has not been previously developed and would be significantly changed when development occurs. Implementation of mitigation measure 5.2-1 reduces the significant landform alteration and aesthetics impacts; however, the open, rolling hills would be permanently altered by development and the impact due to the change from open areas to developed areas remains significant and unmitigated. As discussed in the body of the EIR, landform alteration is a significant effect, both directly, through its development, and cumulatively as it adds to the general trend in the region of converting undeveloped land to developed land in response to population growth.

The cumulative analysis of the RCP EIR concludes that there would not be "…a cumulatively significant impact to designated or eligible scenic highways in the greater southern California region. Implementation of the proposed General Plan Update would therefore not have a cumulatively significant impact to designated or eligible scenic highways. State law requires a Scenic Highway Element as a component of their general plans and the expectation is that development guidance in these documents would reduce impact to scenic highways. Therefore, implementation of the proposed General Plan Update is determined to have a less than significant cumulative impact to scenic highways. The RCP concluded that the loss of views of significant landscape features and landforms would incrementally increase with implementation of the RCP and general plans within the region. Future development within the East Planning Area would permanently alter the open, rolling hills by development. The impact due to the change from open areas to developed areas are cumulatively significant and unmitigated.

6.3 Biological Resources

The cumulative assessment of biological resources impacts relies on the Chula Vista MSCP Subarea Plan. Preservation of the region's biological resources is being addressed through the implementation of regional habitat plans. Impacts to biological resources in Chula Vista are managed through the Chula Vista MSCP Subarea Plan. The Subarea Plan is part of the adopted General Plan and there are no proposed amendments to the Subarea Plan that would lessen the protection of sensitive biological resources. In addition, implementation of the Subarea Plan would contribute significant conservation outside the Chula Vista Subarea within the Chula Vista MSCP Planning Area in the unincorporated County Multi-Habitat Planning Area (MHPA).

In accordance with Section 15064 h(3) of the State CEQA Guidelines:

> . . . a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located.

Because compliance with the MSCP subarea plan prevents significant impacts to biological resources, the effect of the proposed General Plan Update would be less than cumulatively considerable. Therefore, no significant cumulative impacts would result.

Scenario 2 proposes to change the designation of a portion of Wolf Canyon from Open Space to Residential. This was identified in the biology and land use sections of this document as a significant direct impact. It is not considered a cumulative effect because on a regional basis, cumulative impacts to biology are addressed though the application of the MSCP and the Chula Vista Subarea Plan.

6.4 Cultural Resources

The cumulative assessment of cultural resources impacts relies on SANDAG's Regional Comprehensive Plan. The continued pressure to develop or redevelop areas would result in incremental impacts to the historic record in the San Diego region. Regardless of the efforts to avoid impacts to cultural resources, the more that land is converted to developed uses the greater the potential for impacts to cultural resources. While any individual project may avoid or mitigate the direct loss of a specific resource, the effect is considerable when considered cumulatively. The RCP concluded that the loss of historic or prehistoric resources from the past, present, and probable future projects in the Southern California/Northern Baja California, Mexico areas would contribute to cumulatively significant impacts to cultural resources. Implementation of the proposed General Plan Update, in conjunction with other future projects would result in a significant cumulative impact to cultural resources. Mitigation measure 5.4-1 requires a cultural resource survey or review, for any future development project that has not been previously examined, to identify any specific resources that could be potentially affected by the proposed General Plan Update. This mitigation measure would reduce incremental cumulative impacts associated with the adoption of the Preferred Plan or any of the Scenarios, but it would not reduce the cumulative impact to cultural resources to below a level of significance. Therefore, the cumulative impact on cultural resources is significant and unmitigated.

6.5 Paleontological Resources

The cumulative assessment of paleontological resources impacts relies on SANDAG's Regional Comprehensive Plan. As with cultural resources, the continued pressure to develop undeveloped areas would result in incremental impacts to the paleontological record in the San Diego region. Regardless of the efforts to avoid impacts to these resources, the more that land is converted to developed uses the greater the potential for adverse impacts. While any individual project may avoid or mitigate the direct loss of a specific resource, the effect is considerable when considered cumulatively. The RCP concluded that the loss of historic or prehistoric resources from the past, present, and probable future projects in the Southern California/Northern Baja California, Mexico areas would contribute to cumulatively significant impacts to paleontological resources. Implementation of the proposed General Plan Update, in conjunction with other future projects in the cumulative analysis areas would result in a significant cumulative impact to paleontological resources. Mitigation measures 5.6-1 and 5.6-2 require a pre-construction mitigation program or construction mitigation program, or both, if it is determined that potentially significant impacts to sensitive paleontological resources may result. These measures would reduce incremental cumulative impacts associated with the adoption of the Preferred Plan or any of the Scenarios, but they would not reduce the cumulative impact to paleontological resources to below a level of significance. Therefore, the cumulative impact on paleontological resources is significant and unmitigated.

6.6 Agriculture

The cumulative assessment of agricultural impacts relies on SANDAG's Regional Comprehensive Plan and the City of Chula Vista Subarea Plan. The city of Chula Vista contains 0.03 percent Prime Farmland and no Farmland of Statewide Importance. The limited amount of Prime Farmland in the city by itself is not considered substantial.

As noted in the agricultural discussion of this EIR, no areas of highly productive agricultural lands have been identified within the General Plan area. Lands zoned for agriculture in the Eastern Territories, specifically, within the eastern portions of the Otay Ranch, east of the Otay Reservoir, and north and south of Dulzura Creek, are generally located in areas with higher biological resource potential and interim agricultural uses have been phased out. Long-term agricultural use is not planned for the area but is allowed to continue where consistent with existing habitat preservation requirements and zoning.

Supplying agricultural land within the city of Chula Vista with an economical source of water is a major impediment. Domestic and agricultural uses must compete for this scarce resource. Rising land values, water costs, increasing taxes, habitat management planning, and other land use conflicts, combined with pressure for urbanization, have contributed to a significant reduction in agricultural uses and future viability for agricultural production within the plan area.

Although there is a trend in the region to convert land from agricultural uses to developed uses, and while the proposed amendments to the Chula Vista General Plan would not prevent that conversion, they also would not contribute to it. As such, impacts to agricultural resources are not considered cumulatively considerable.

The Preferred Plan does not alter the land use designation for the small amount of Prime Farmland within the General Plan Update area. Direct impacts to agricultural uses are considered not significant because the plan does not require or result in the conversion of prime farmland or farmland of statewide importance. The proposed General Plan Update continues to apply non-agricultural land uses to this 0.03 percent of prime farmland within the City and provides for its continued use as farming land. Policy EE 4.1 allows historical agricultural uses to continue within planned development areas as an interim land use in accordance with the MSCP Subarea Plan, and Policy EE 4.2 allows agricultural uses on privately owned property within the Chula Vista Greenbelt and elsewhere, provided the use is consistent with the provisions of the MSCP Subarea Plan as well as the zoning of the property. Because the Preferred Plan does not alter the land use designations for the small amount of Prime Farmland it does not contribute to the cumulative conversion of farmland and does not, therefore, represent a significant cumulative adverse impact.

6.7 Air Quality

The cumulative assessment of air quality impacts relies on the current Regional Air Quality Strategy (RAQS). In order to meet federal air quality standards in California, the California Air Resources Board (CARB) required each air district to develop its own strategy for achieving the NAAQS. The San Diego APCD prepared the 1991/1992 RAQS in response to the requirements set forth in the California Clean Air Act. The RAQS set forth the steps needed to accomplish attainment of state and federal ambient air quality standards.

The current RAQS are based on the adopted General Plan. Because the proposed land use changes would be inconsistent with the adopted General Plan upon which the RAQS was based, the General Plan Update would not conform to the current RAQS. If a project is inconsistent with a City's adopted General Plan, it cannot be considered consistent with the growth assumptions in the RAQS. Consequently, the proposed General Plan Update is not considered consistent with the growth assumptions in the RAQS.

The City of Chula Vista has adopted and developed a number of strategies and plans aimed at improving air quality. The Carbon Dioxide (CO_2) Reduction Plan was designed to lower the community's major greenhouse gas emissions, strengthen the local economy, and improve the global environment. The CO_2 Reduction Plan focuses on reducing fossil fuel consumption and decreasing reliance on power generated by fossil fuels (City of Chula Vista 2002a). A reduction in the usage of power generated by fossil fuels would result in a decrease in the total amount of air pollutants that are emitted into the atmosphere during power generation.

The City of Chula Vista's Growth Management Program is a component of the City's effort to create a comprehensive system to manage future growth (City of Chula Vista 1991). Air quality is one of eleven approved public facility and service topics with related "quality-of-life" indicator threshold standards and implementation measures listed in a policy statement dated November 17, 1987 that includes a list of the public facilities and services approved with City Council Resolution No. 13346 (City of Chula Vista 1991). The goal of the air quality portion of the program is to improve the ambient air quality of Chula Vista.

The City's Growth Management Ordinance and Growth Management Program require an Air Quality Improvement Plan (AQIP) to be prepared for all major development projects. A major development project is defined as a project that would develop 50 or more dwelling units. The purpose and role of the AQIPs is to reduce air emissions and energy use resulting from major development projects through improved project design and construction of structures that exceed mandated energy code requirements. The AQIP Guidelines establish the process for AQIP compliance.

In addition to the AQIPs that are required by the growth management ordinance for all projects over 50 units, the City also implements a number of measures recommended in the CO_2 Reduction Plan adopted by City Council on November 14, 2000. The plan is directed to lower the community's major greenhouse gas emissions, strengthen the local economy, and improve the global environment. The CO_2 Reduction Plan focuses on reducing fossil fuel consumption and decreasing reliance on power generated by fossil fuels (City of Chula Vista 2002b). A reduction in the usage of power generated by fossil fuels would result in a decrease in the total amount of air pollutants that are emitted into the atmosphere. Implementation of these programs would go a long way to lessen adverse air quality impacts.

Nevertheless, the General Plan Update is considered to have a significant cumulative air quality impact. Future development projects within the cumulative study area are anticipated to significantly impact the local street network, resulting in the potential for an increase in carbon monoxide (CO) hot spots. Because air quality, particularly ozone, is a regional issue, not all measures needed to comply with state and federal standards are within the ability of Chula Vista to control. Mitigation of these regional issues requires coordination of the planning process with the regional air quality management program as implemented by the San Diego APCD.

Because the significant cumulative air impacts stem from an inconsistency between the proposed General Plan Update and the adopted General Plan upon which the RAQS were based, the only measure that can lessen the effect is the revision of the RAQS based on the updated General Plan. This effort is the responsibility of SANDAG and the San Diego APCD and is outside the jurisdiction of the City. While the RCP and the RTP provide for measures that reduce air quality impacts, such as pedestrian paths and bicycle paths, this impact results from the incompatibility between the growth projections and the proposed General Plan Update. As such, no mitigation is available to the City.

The San Diego Air Basin is non-attainment for federal and state ozone standards, state PM_{10} and state $PM_{2.5}$ standards. An increase in air emissions would be roughly proportional to an increase in population. While commercial and industrial sources would contribute to these emissions, proportional increase in residential units can serve as a general indicator of the potential for population growth and related air quality effects. Because the air basin is non-attainment for ozone, $PM_{2.5}$, and PM_{10}, the potential increase in residential units and the activities associated with population growth, even as mitigated in the General Plan Update and as otherwise mitigated by the City in its CO_2 Reduction Plan and Growth Management Program, represents a cumulatively considerable and significant air quality impact. Mitigation measure 5.11-1 would reduce incremental cumulative impacts associated with the adoption of the Preferred Plan or any of the Scenarios, but it would not reduce the cumulative impact to air quality resources to below a level of significance. This measure 5.11-1 addresses the mitigation of PM_{10} impacts by requiring active dust control during construction. It states that, as a matter of standard practice, the City shall require 10 standard construction measures during construction to the extent applicable. These measures are listed in Section 5.11.5 of this report.

6.8 Transportation

The traffic analysis conducted for this project employed the regional traffic database and modeling employed by SANDAG. As such, it included the projected growth for the region, including both growth in regional trips and anticipated expansion of the circulation system. Traffic effects identified in Chapter 5.10 of this EIR are significant. The traffic analyses included mitigation measures to reduce significant traffic impacts. These mitigation measures included operational improvements which would improve traffic flow and alleviate peak hour congestion; however, they would not increase the 24-hour capacity of a segment, which is based on the number of lanes, and would, therefore, not result in avoidance of impacts. As such, operational improvements would reduce impacts but not to a level less than significant. Therefore, significant and unmitigated cumulative traffic impacts are noted for the street network. The mitigation measures presented in Section 5.10.5 require operational improvements as specified in Table 5.10-4 of this EIR, or the contribution to the existing Transportation Development Impact Fee (TDIF) program or Traffic Signal Fee Program for applicable projects in eastern Chula Vista. These measures would reduce some of the incremental cumulative impacts associated with the proposed General Plan Update, however, these measures would not reduce the cumulative traffic impacts to below a level of significance. Therefore, the cumulative impact on traffic is significant and unmitigated.

6.9 Noise

The cumulative assessment of noise impacts relies on SANDAG's RCP. Cumulative noise impacts would generally be attributed to increases in traffic volumes. The noise analysis conducted for this EIR and presented in Chapter 5 used cumulative traffic volumes on area roads. Those traffic volumes assumed the growth in the City as projected in accordance with

the proposed General Plan Update, and, for areas outside the City, the traffic volumes projected by SANDAG for the RCP. The RCP concluded that cumulative traffic impacts throughout the region could exacerbate noise levels to such a magnitude to significantly affect existing land uses. Similarly, the noise analysis conducted for the project indicated that significant cumulative noise impacts would occur to existing receivers adjacent to certain circulation element roadways (see Table 5.12-6).

Section 3.5 of the proposed Environmental Element addresses noise. That section recognizes that land uses that generate significant noise should be separated from uses that are particularly sensitive to noise. To establish the compatibility of various land uses with exterior noise levels, the element specifies the use of CNEL to address potential adverse noise effects. Plans developed in the city of San Diego or county of San Diego would not contribute to noise in the city of Chula Vista or be affected by noise generated within the city. As such, avoidance of direct noise effects resulting from new development as identified in Chapter 5.12 of this EIR would also ensure avoidance of an incrementally considerable contribution to an adverse condition.

The noise contour maps presented in Section 5.12 reflect the cumulative effects of traffic noise. Policies associated with Objectives EE 21 and EE 22 protect people from excessive noise through careful land use planning and the incorporation of appropriate mitigation techniques as well as protect the community from the effects of transportation noise. Implementation of these policies reduce impacts from this additional noise, but not to below a level of significance. Future traffic volumes are the basis for the predominance of future noise effects. The traffic volumes used in the noise report are based on the cumulative effects of traffic. As such, the noise analysis is a cumulative analysis. A significant impact will occur to existing receivers adjacent to circulation element roadways where traffic volumes are projected to result in noise level increases of more than 3 decibels. Lessening the noise levels in these areas would require a lot-by-lot review of potential exterior use areas and an evaluation of the acoustical performance of each building exposed to the increase. The exterior analysis would assess the feasibility of reducing noise levels to outdoor use areas and the interior review would require consideration of the effectiveness of existing windows and doors, the adequacy of existing construction, and the need for retrofit. Since this level of analysis is infeasible at the General Plan stage, direct and cumulative impacts remain significant and not mitigated. The adoption of the Preferred Plan or any of the Scenarios have the same effects since they are the same at the general plan level of analysis.

6.10 Public Services and Utilities

Potable water for the city of Chula Vista is provided by member agencies of the SDCWA whose mission it is to provide a safe and reliable supply of water to the San Diego region. To meet their long-term obligation of supplying water to member agencies, SDCWA has developed several plans. These plans use estimates of future populations developed by

SANDAG to forecast the need for water and delivery systems. Key among these plans are the UWMP and the Regional Water Facilities Master Plan.

In order to project and plan for future water needs, SDCWA has entered into a Memorandum of Agreement with SANDAG to use the most recent regional growth forecast for planning purposes. Using the growth forecasts, SDCWA has developed the UWMP and updates it every five years. This plan considers the demands for population and water use through the next 20 years.

Because the UWMP is closely integrated with the regional growth forecasts by SANDAG, the basis of those forecasts is critical to supply and demand projections. SANDAG projects growth based in part on local general plans. The projections involve development of an estimate of regional population growth and the distribution of that population within the region. To the extent that development occurs in accordance with the general plans used to prepare the growth forecasts, their long-term impact on water supply and demand were included in the Authority's plans. To the extent that a project differs from the General Plan assumptions, it could vary from the SDCWA projection.

Because water supply forecasts are based on the regional growth forecasts conducted by SANDAG, and because the regional growth forecasts rely on adopted general plans, amending the adopted general plan with land uses proposed for the General Plan Update to increase development potential would result in an inconsistency between the water supply forecast and Chula Vista's General Plan Update. The inconsistency results from the fact that with the adoption of the General Plan Update the supply forecast would not be based on the adopted plan.

The cumulative effects of water supply are addressed in the EIR prepared for the RCP. That document indicated that the Regional Water Facilities Master Plan is sufficiently flexible to "…allow for the sizing and timing of water supplies to be adjusted to meet the demand…" (SANDAG 2004 5.12-10). And concludes that "Therefore, adequate water supplies are expected to meet the additional need anticipated with the implementation of the RCP." (SANDAG 2004 5.12-10).

Each of the scenarios proposes to increase development potential in each update area of the city. Table 5.14-2 contains projected water demand for the Update areas, for the Preferred Plan, and Scenarios 1, 2, and 3 compared to existing conditions. Because demand for water is expected to increase along with the increase in population, and because a long-term water supply is not assured, the supply of potable water is considered a cumulatively significant issue.

Objective PFS 2 contains policies to increase efficiencies in water use, wastewater generation and its re-use, and handling of stormwater runoff throughout the city through use of alternative technologies. Objective PFS 3 contains policies to ensure a long-term water

supply to meet the needs of existing and future uses in Chula Vista. Compliance with the policies associated with Objectives PFS 2 and 3 and implementation of the mitigation measures 15.14-1 and 5.14-2, which require the appropriate projects to demonstrate compliance with the requirements of SB 610 and SB 221, would reduce the impact to water supply; however, because there is no assurance that water supply would be available to adequately serve the projected increase in population resulting from the proposed General Plan Update, the cumulative impact remains significant and unmitigated.

Sewer services are addressed in two elements of the General Plan Update. Based on recent flow analysis performed by City staff, it is estimated that by the year 2020 approximately 25 MGD of sewage would be generated within the city. Additional capacity would be needed to meet this demand.

Recently, City of San Diego Metropolitan Sewage System (Metro) allocated additional capacity rights to participating agencies. The completion of the Southbay treatment plant resulted in an additional 15 MGD treatment capacity to the Metro regional system. While the allocation process has not yet been finalized, the anticipated allocation to the City of Chula Vista is currently estimated to be 1.027 MGD. As the city's sewage generation approaches its capacity rights, Metro will take appropriate steps to provide the city with additional capacity to meet build-out needs.

Policies GM 1.9 and GM 1.11 would require that major development projects provide a public facilities financing plan that articulates needed facilities and identifies funding mechanisms as well as provides the authority to withhold discretionary approvals and subsequent building permits from projects that are out of compliance with threshold standards. Implementation of Policies GM 1.9 and GM 1.11, avoid impacts resulting from completion of infrastructure. Therefore, cumulative impacts to wastewater are not significant.

6.11 Energy

The cumulative assessment of energy impacts relies on SANDAG's Regional Comprehensive Plan. The RCP concluded that future population growth in the Southern California/Northern Baja California, Mexico region would result in an increase in the need for energy resources, which would be considered to have a cumulatively significant energy impact.

As population increases, demand for energy also increases. Because the development and management of energy resources are not presently within the control of the City, there is no assurance that an adequate supply of energy would be available. While it is anticipated that an adequate supply of energy would be available, experience has shown that shortages in energy supply can occur. As with direct impacts, Mitigation Measure 5.8-1 would lessen the extent of cumulative energy impacts that would result from the approval of the Preferred

Plan or any of the Scenarios. This measure calls for the City to continue to implement the Energy Strategy and Action Plan and continuing implementation of the CO_2 Reduction Plan. Although the City has taken steps to limit the expanding need for energy, the potential increase in development represented by the proposed General Plan Update has the potential to add incrementally to this demand and represents an unmitigated significant cumulative impact.

6.12 Housing and Population

The RCP EIR prepared by SANDAG (2004) indicates that there will be a potential increase in regional population between 2004 and 2030 of 1,012,737 people and an increase of 301,065 housing units. These figures represent a 3.4 percent increase over previous, non-RCP projections. The RCP EIR concluded that this represented a significant regional impact to housing and population. Table 6-2 provides the projected increase for the Preferred Plan and each of the Scenarios relative to the existing condition. Of the million person increase anticipated in the region, the Preferred Plan would represent about 10 percent of that amount. The increase in housing units represents about 14 percent of the regional growth. Because the regional growth was considered significant and the population and housing growth forecast for Chula Vista is a substantial portion of those numbers, housing and population is considered cumulatively considerable and therefore a significant impact.

The environmental impacts associated with increased population are discussed in the individual topical sections of this report. Impacts to issues, such as traffic, air quality noise, etc., due to population and housing increases from the adoption of the Preferred Plan and all three Scenarios are discussed in Sections 5.1 through 5.16 and Chapter 7 of this document. As indicated in the RCP EIR there is no feasible mitigation available to reduce the regional population increase, and, therefore, the impact remains significant and unmitigated.

TABLE 6-2
INCREASE IN POPULATION AND HOUSING COMPARED TO EXISTING CONDITIONS FOR THE GENERAL PLAN UPDATE PLANNING AREA

	Population	Increase	Percent Change	Housing Units	Increase	Percent Change
Existing	222,300	–	–	74,231	–	–
Preferred Plan	326,900	104,600	47	115,093	40,862	55
Scenario 1	319,843	97,543	44	112,136	37,905	51
Scenario 2	328,134	105,834	48	115,358	41,127	55
Scenario 3	313,953	91,653	41	110,164	35,933	48

SOURCE: City of Chula Vista 2005.